Claims

1.   A dynamic searching method of video contents comprising the steps of:

(a) determining a normal replay section and a fast forward replay section with considering shot index information and a current replay location; and

(b) replaying the video contents from the current replay location at corresponding speeds according to the determined sections.

2.   The dynamic method of claim 1, wherein the step (b) comprises the steps of:

(b-1) fast-forwarding the video contents from the current location at a speed as fast as the replay speed of the fast forward replay section; and

(b-2) replaying the video contents at a normal speed as fast as the speed of the normal replay section when a replay location of the video contents accords with a start location of the normal replay section.

3.   The dynamic method of claim 1, wherein the normal replay section is determined using a start location and length information obtained from the shot index information.

4.   The dynamic method of claim 1, wherein, in the normal replay section, audio contents as well as the video contents are replayed at a normal speed.

5.   The dynamic method of claim 1, wherein the shot index information comprises section information in a stream for an individual shot that is a physical editing unit of the video contents.

6.   The dynamic method of claim 1, wherein the replay mode is switched from the normal replay to the fast forward replay in any one case selected from the group consisting of a case that a user clearly requests the fast forward replay during the normal replay in a dynamic search mode, a case that the user requests a dynamic search function during the normal replay, and a case that a predetermined amount of the video contents has been completely replayed at a normal speed in a dynamic search.

7.   The dynamic method of claim 1, wherein the replay mode is automatically switched from the normal replay into the fast forward after a predetermined amount of the video contents has been replayed at a normal speed during a dynamic search,

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and

the amount of the video contents to be replayed at the normal speed corresponds to an entire selected shot.

8.   The dynamic method of claim 1, wherein the replay mode is automatically switched from the normal replay into the fast forward after a predetermined amount of the video contents has been replayed at a normal speed during a dynamic search, and

the amount of the video contents to be replayed at the normal speed is an amount designated in a first half of a selected shot regardless of shot length.

9.   The dynamic method of claim 1, wherein the replay mode is switched from the fast forward replay to the normal replay in any one case selected from the group consisting of a case that a user clearly requests the normal replay during the fast forward in a dynamic search mode, a case that a replay location of the video contents reaches a start location of a shot whose normal replay section is long during the fast forward for the dynamic search.

10.   The dynamic method of claim 1, wherein the replay mode is automatically switched from the fast forward into the normal replay during the fast forward for a dynamic search,

a current replay location of the video contents is a start location of the normal replay, and

a shot to begin to be replayed at a normal speed is selected as a shot whose length is larger than a predetermined threshold, the length being calculated based on shot section information (start location and end location) in the shot index information.

11.   The dynamic method of claim 1, wherein the replay mode is automatically switched from the fast forward into the normal replay during the fast forward for a dynamic search,

a current replay location of the video contents is a start location of the normal replay, and

a shot to begin to be replayed at a normal speed is selected as a shot whose division result is larger than a predetermined threshold, the division result being obtained by dividing length calculated based on shot section information (start location and end location) in the shot index information by an average of lengths of surrounding shots.

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12.   The dynamic method of claim 1, wherein, when the video contents are fast-forwarded for more than a predetermined period defined in the dynamic search, the video contents automatically begin to be replayed at a normal speed during the fast forward.

13.   A dynamic searching method of video contents comprising the steps of:

(a) when a dynamic search is requested during a video browsing, determining a normal replay section with considering shot index information and a current replay location of video contents;

(b) fast-forwarding the video contents at a high speed from the current replay location to a start location of the normal replay section;

(c) replaying the video contents at a normal speed as fast as the speed of the normal replay section when a replay location of the video contents is a start location of the normal replay section; and

(d) when the replay of the video contents on the normal replay section is completed, repeatedly performing the steps (a) to (c).

14.   The dynamic method of claim 13, wherein, in the normal replay section, audio contents as well as the video contents are replayed at a normal speed.

15.   The dynamic method of claim 13, wherein the shot index information comprises section information in a stream for an individual shot that is a physical editing unit of the video contents.

16.   The dynamic method of claim 13, wherein the replay mode is switched from the normal replay to the fast forward replay in any one case selected from the group consisting of a case that a user clearly requests the fast forward replay during the normal replay in a dynamic search mode, a case that the user requests a dynamic search function during the normal replay, and a case that a predetermined amount of the video contents has been completely replayed at a normal speed in a dynamic search.

17.   The dynamic method of claim 13, wherein the replay mode is switched from the fast forward replay to the normal replay in any one case selected from the group consisting of a case that a user clearly requests the normal replay during the fast forward in a dynamic search mode, a case that a replay location of the video contents reaches a start location of a shot whose normal replay section is long during the fast forward for the dynamic search.

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18.   A dynamic searching apparatus of video contents comprising:

a media storage unit for storing video contents;

an index storage for storing shot index information on the video contents;

an index generator for generating shot index information of the video contents;

a controller for determining a normal replay section and a fast forward replay section by using the shot index information, and controlling to replay the video contents according to the determined sections; and

an output unit for outputting the replayed video contents.

19.   The dynamic apparatus of claim 18, wherein the controller comprises:

a command interpreter for generating commands for replaying control, recording control, nonlinear video browsing control and indexing control to provide functions of record, index generation, replay and dynamic search;

a record controller for controlling to store the video contents in the media storage unit;

a replay controller for outputting the video contents to the output unit, controlling to replay the entire video contents, and providing a nonlinear video browsing function and fast-forward/fast-rewind functions; and

an index manager for delivering storage information on the video contents to the replay controller to provide the fast-forward/fast-rewind functions, and providing the shot index information to the nonlinear video browsing controller.